RRRAT SOFTWARE UPGRADE TO SUPPORT THE OPEN RPG DEPLOYMENT

DOPPLER METEOROLOGICAL RADAR
WSR-88D
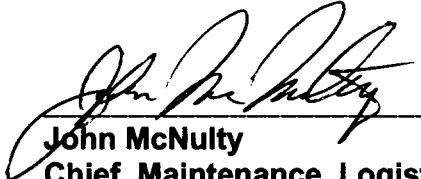
Issuance Number: EHB 6-01-04
Data Code: 3118765
Issuance Date: 3 August 2001
NWS/DoD Rescission Date: 1 September 2002

NWS APPROVAL:

_____Date 8/9/01

John McNulty
Chief, Maintenance, Logistics,
and Acquisition Division

DoD APPROVAL:

BY ORDER OF THE SECRETARY OF THE AIR FORCE

MICHAEL E. RYAN, General, USAF
Chief of Staff

_____Date 8 /4/ 01

Edward L. Berkowitz, Chief
Programs Branch
Radar Operations Center
TOMA

1.   **SUBJECT**

RDA/RPG Remote Access Terminal (RRRAT) Software Upgrade to Support the Open Radar Product Generation (ORPG) Deployment.

2.   **PURPOSE**

To provide procedures to configure the RRRAT machines at the Radar Data Acquisition (RDA) Man Machine Interface (MMI) and Unit Control Position (UCP) for connectivity to the Master System Control Function (MSCF). The benefit will be to access the MSCF from the RDA RRRAT. The authority for this modification is Radar Operations Center (ROC), Configuration Change Request (CCR) 01-00134, RRRAT Software Enhancement.

This modification MUST be accomplished prior to the installation of Open RPG.

Retain a copy of this document for future reference. If Windows 95 needs to be reloaded, the procedures in this document will need to be reaccomplished.

For additional information concerning this document, contact the ROC Hotline, Norman, OK; phone number: (800) 643-3363 or (405) 366-2980 or by e-mail at NEXRAD.Hotline@noaa.gov. An electronic copy of this document can be found at the following internet address:
www.roc.noaa.gov/ssb/sysdoc/techman/tmlinks.asp

3.   **SITES AFFECTED**

See ATTACHMENT 2 for site effectivity.

4.   **ESTIMATED COMPLETION DATE**

This modification must be completed and reported no later than 60 days after receipt of this document.

5.   **EQUIPMENT AFFECTED**

Radar Data Acquisition Group.
Radar Product Generation Group (Unit Control Position).

6.   **SPARES AFFECTED**

Nomenclature	Part Number	NSN
CPU Assembly	2300000-301	7021-01-452-1324

7.   MODIFICATION ACCOMPLISHED BY

Site electronics technicians will accomplish this task. One technician is required to perform these procedures.

8.   MATERIAL REQUIRED

Nomenclature	ASN	NSN	Qty
CD-ROM, RDA/RPG Remote Access Terminal Software Enhancement for Open RPG	XEHB-6-01-04	NWS0-12-150-0003	1

9.   SOURCE OF MATERIALS

Kits are requisitioned by the ROC and shipped at no cost to the site.

10.   SPECIAL TOOLS AND TEST EQUIPMENT REQUIRED

Not applicable.

11.   TIME AND PERSONNEL REQUIRED

Work Phases	Work-hours
Unpacking	0.1
Disassembly	0.0
Installation	1.2
Assembly	0.0
Operational Check	0.7
Total Work-hours	2.0

12.   DOCUMENTS AFFECTED

Not applicable.

13.   **VERIFICATION STATEMENT**

This modification was successfully installed at WFO Topeka, KS and WFO Tulsa, OK.

14.   **DISPOSITION OF REMOVED AND REPLACED PARTS/MATERIALS**

Not applicable.

15.   **PROCEDURES**

Perform the procedures in ATTACHMENT 1 at the RDA and UCP.

16.   **FAA DISTRIBUTION**

Not applicable.

17.   **CHANGES TO TABLE OF CONTENTS (FAA)**

Not applicable.

18.   **RECOMMENDATIONS FOR CHANGES (FAA)**

Not applicable.

19.   **REPORTING INSTRUCTIONS**

   a. NWS

Report the completed modification on WS Form A-26, Engineering Management
Reporting System Maintenance Record, according to the instructions in Engineering
Handbook No. 4 (EHB-4), Engineering Management Reporting System (EMRS), Part 2
and Appendix G. One WS Form A-26 should be completed for each RDA and each UCP.
Include the following information on the WS Form A-26:

- An appropriate equipment code in Block 7.
- The appropriate serial number in Block 8.
- A Mod No. of S17 in Block 17a.

See ATTACHMENT 4 for a completed sample of WS Form A-26.

   b. DoD

Update the AFTO Form 95 to show TCTO compliance. Report TCTO compliance in
accordance with TO 00-20-2, Table 3-10, Rule 9.

Complete ATTACHMENT 3 and return the information to the ROC by one of the four methods below:

    (1) Mail Address: Program Branch, Retrofit Management Team
                                       WSR-88D Radar Operation Center
                                       3200 Marshall Ave., Suite 101
                                       Norman, Oklahoma 73072-8028

    (2) Fax Number: (405) 366-6553
                                         ATTN: Retrofit Management Team

    (3) E-mail Address: NEXRAD.Logistics@noaa.gov

    (4) Web Version: http://www.roc.noaa.gov/ssb/logistics/completion.asp

ATTACHMENT 1

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

Initial Conditions

Record the phone numbers for the RDA RRRAT terminal and the
UCP RRRAT terminal. These numbers will be required in
procedures below.

RDA RRRAT: _____

UCP RRRAT: _____

NOTE

Retain a copy of this document for future reference. If
Windows 95 needs to be reloaded, the procedures in this
document will need to be reaccomplished.

Software Required

CD-ROM RDA/RPG Remote Access Terminal Software Enhancement for Open RPG
CD-ROM CPCI-14 RDA/RPG Remote Access Restoral Software (previously provided
with Modification Note 41)

1. Perform the following steps to enable dial-up networking on Windows 95:

    a. Close the pcANYWHERE System Console and Application windows by pressing **<Alt>X**
    and then the **E** key.

    b. Insert the <u>RDA/RPG Remote Access Restoral Software CD-ROM</u> into the CD-ROM drive.

    c. After the Windows 95 CD-ROM autorun is completed, close the `Windows 95 CD-ROM`
    window if necessary.

    d. From the Windows 95 taskbar, select **Start**, **Settings** and then **Control Panel**.

    e. From the `Control Panel` window, double click on **Add/Remove Programs**.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES
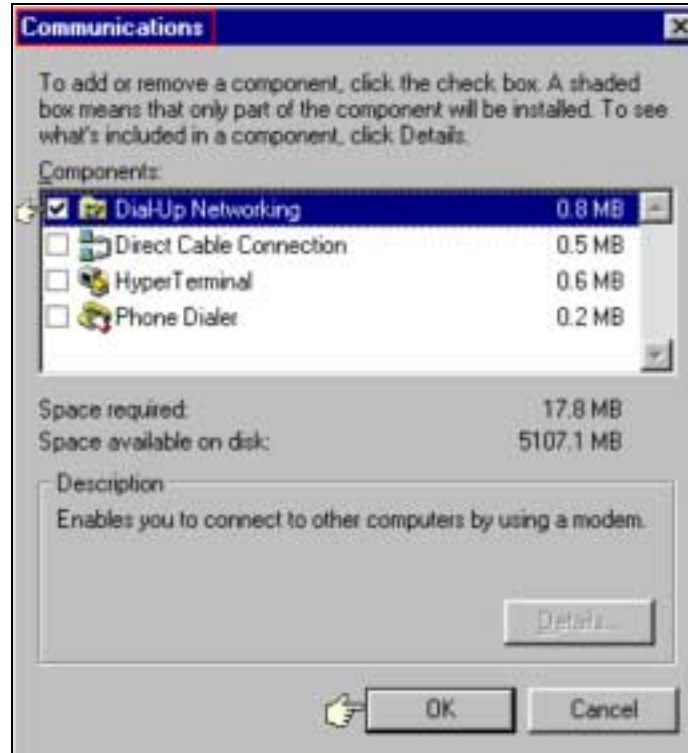
f.   In the `Add/Remove Programs Properties` window, select the **Windows Setup** tab.
     Use the mouse and check the **Communications** box and then select **Details** button.
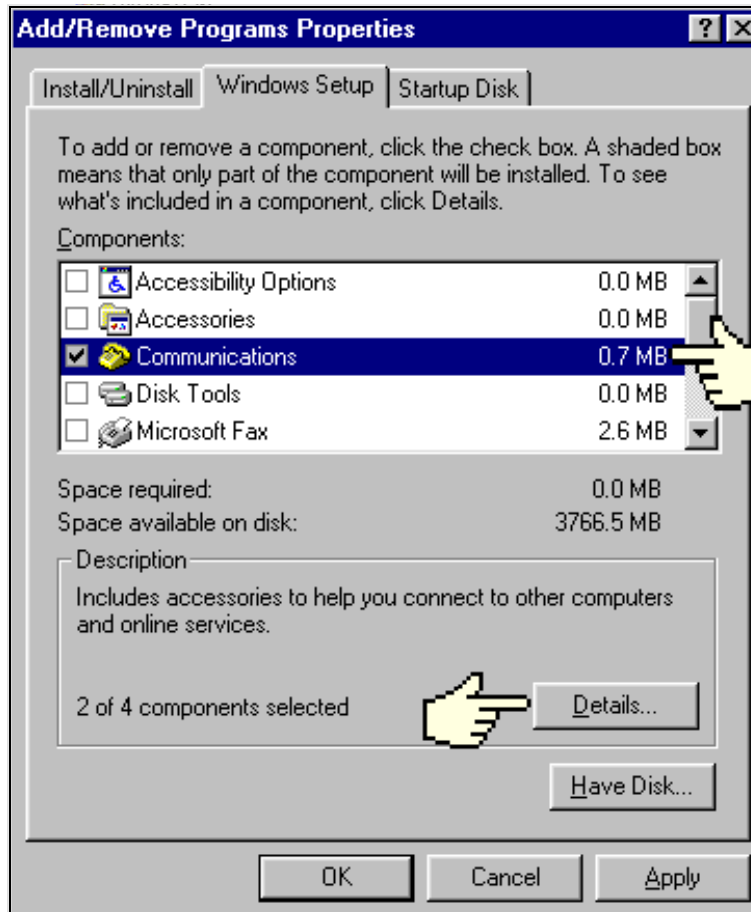
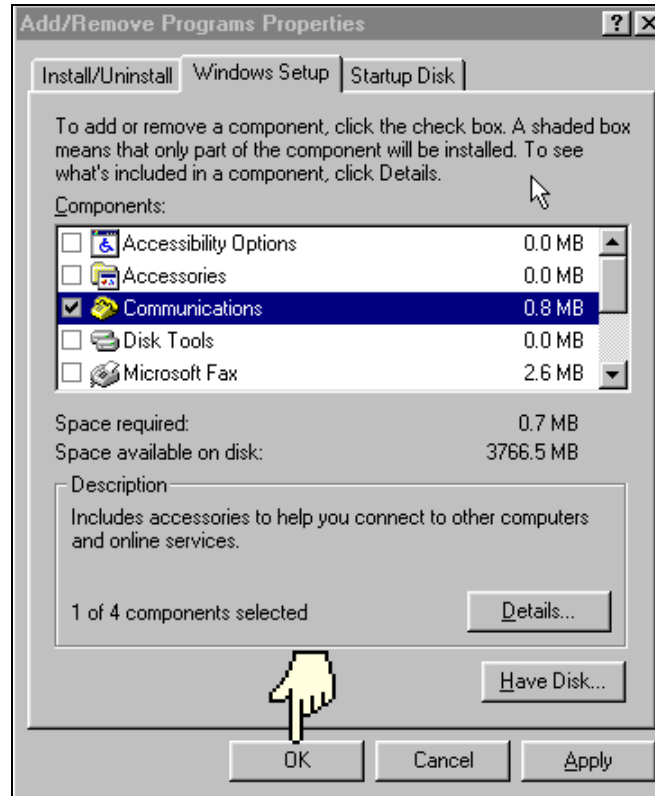**ATTACHMENT 1 (Continued)**

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

g. At the Communications window, using the mouse and check the **Dial-Up Networking** option, and then click on the **OK** button.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

h. From the `Add/Remove Programs` window, click on the **OK** button to start the installation.

i. When the installation is complete click on the **OK** button to close the `Dial-Up Networking Setup` window.

j. If Windows 95 did not automatically reboot, reboot the system to allow the changes to be incorporated. Reboot by selecting **Start**, **Sh<u>u</u>t Down...**, and then select **<u>R</u>estart the Computer?**.

2. Perform the following steps to add TCP/IP Protocol to Dial-Up Networking:

a. Close the pcANYWHERE System Console and Application windows by pressing **<Alt>X** and then the **E** key.

b. From the Windows 95 taskbar, select **Start**, **Settings**, and then **Control Panel**.

c. In the `Control Panel` window, double click on the **Network** icon.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

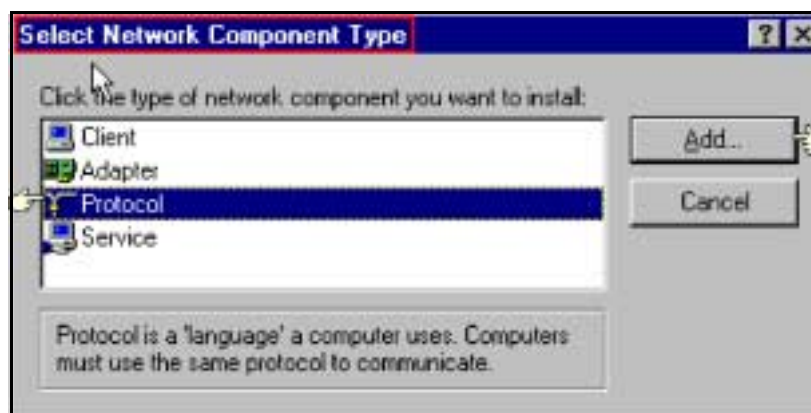d. In the `Network` window, in the **Configuration** tab, select the **Dial-Up Adapter** option and then click on **Add** button.
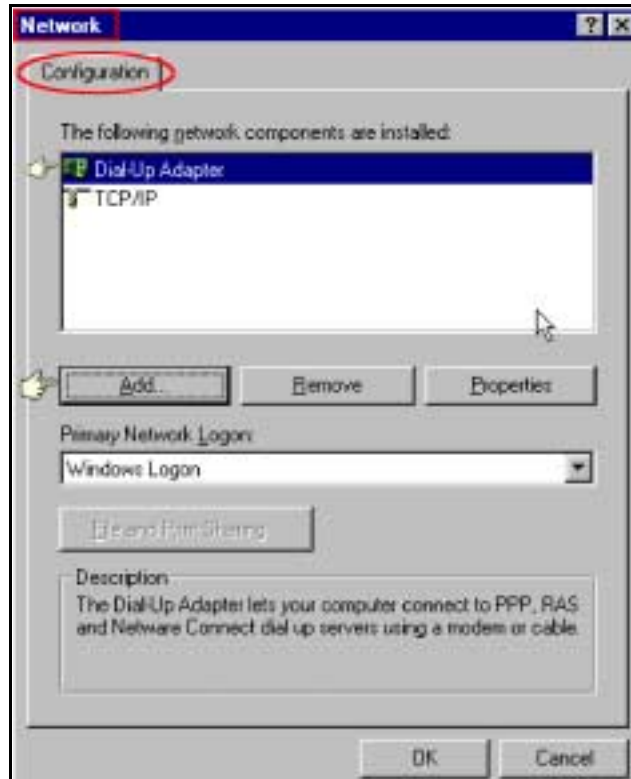
e. In the `Select Network Component Type` window, select **Protocol** and then click on the **Add** button. Windows will build information for the driver.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

NOTE

After completing the next step, the system will reboot automatically.
This will reconfigure the system to accept the changes made.

f.   In the `Select Network Protocol` window, in the `Manufacturers` window select **Microsoft**, and in the `Network Protocols:` window select **TCP/IP**. Click on the **OK** button to add the network connection and then select **OK** again.

g.   When the `DSCP Client` window appears, click on the **NO** button.

h.   The system will now reboot. If prompted to reboot the system, click on the **Yes** button.

3.   Perform the following procedures to upgrade to Microsoft Internet Explorer version 5.5:

a.   Close the pcANYWHERE System Console and Application windows by pressing **<Alt>X** and then the **E** key.

b.   Insert the CD-ROM, <u>RDA/RPG Remote Access Terminal Software Enhancement for Open RPG</u>, into the CD-ROM drive. It may take 1 to 2 minutes for the autorun on the CD-ROM to display.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

c. The `Microsoft Internet Explorer 5.5 and Internet Tools CD` screen will appear. Click once on the **Install Internet Explorer 5.5 and Tools** text.

d. Select **I accept the agreements** option, then click on the **Next>** button.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

e. In the `Windows Update: Internet Explorer and Internet Tools` window, click on the **Install Now - Typical set of components** and then the **Next>** key.
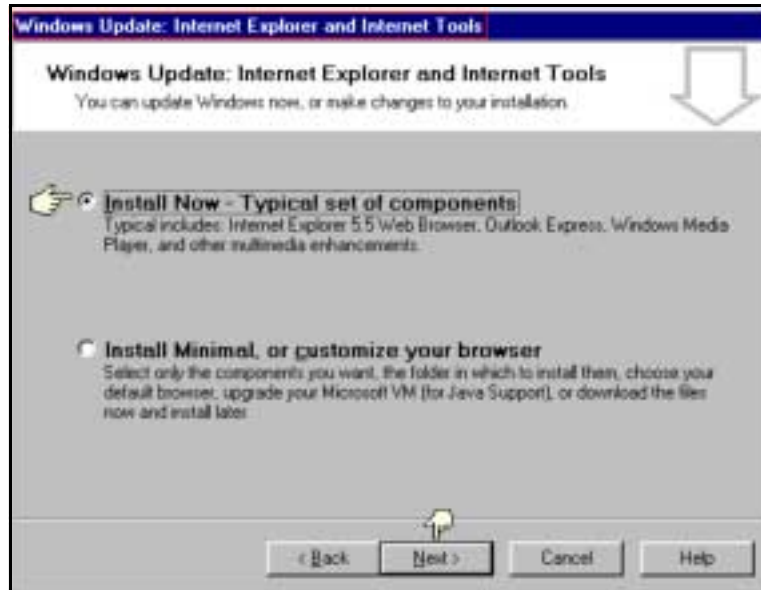
f. Click on the **Finish** button after the installation is completed.

NOTE

If you do not click on the Exit button as directed below, the system will automatically reboot after approximately 10 to 15 seconds.

g. Select **Exit** from the `Windows Upgrade` window. The system will automatically reboot allowing for the software to reconfigure the system.

4. Perform the following procedures to set up dialup network connection to the MSCF located at your site:

a. Close the pcANYWHERE System Console and Application windows by pressing **<Alt>X** and then the **E** key. If Microsoft Explorer autorun begins, close the autorun window by clicking on the **x** in the upper right corner.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

b. From the Windows 95 taskbar, select **Start**, **Programs**, **Accessories**, and then
Dial-Up Networking.
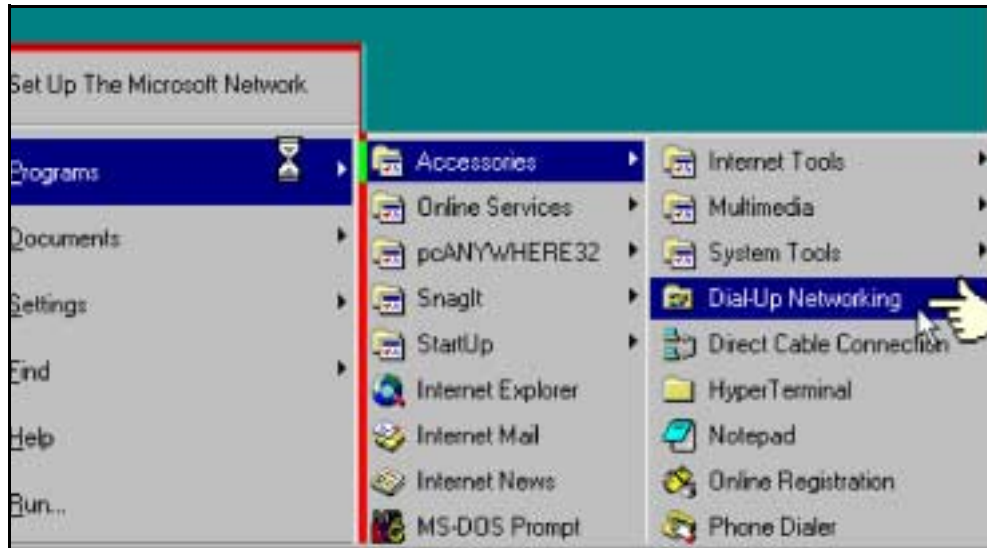
c. In the `Welcome to Dial-Up Networking` window, click on the **Next>** button. The
`Make New Connection Window` will appear.

d. At the `Make New Connection` window, in the `Type a name for the computer
you are dialing` box, enter **MSCF** and then click on the **Next>** key.
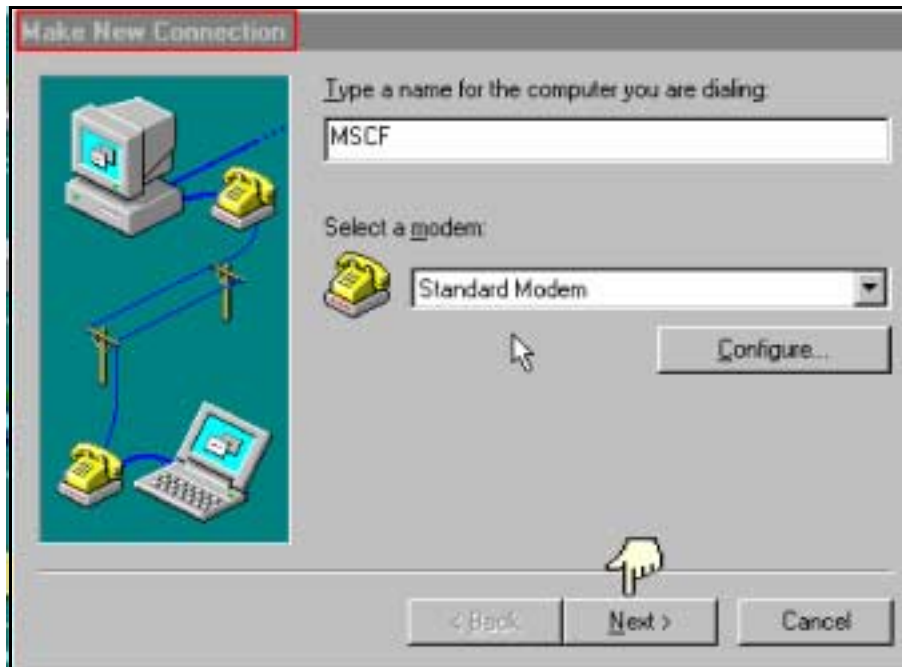
ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

e. At a second window titled `Make New Connection`, enter the *MSCF phone number*
    (same number as the UCP) for the MSCF located at your office and then click on the
    Next> button.
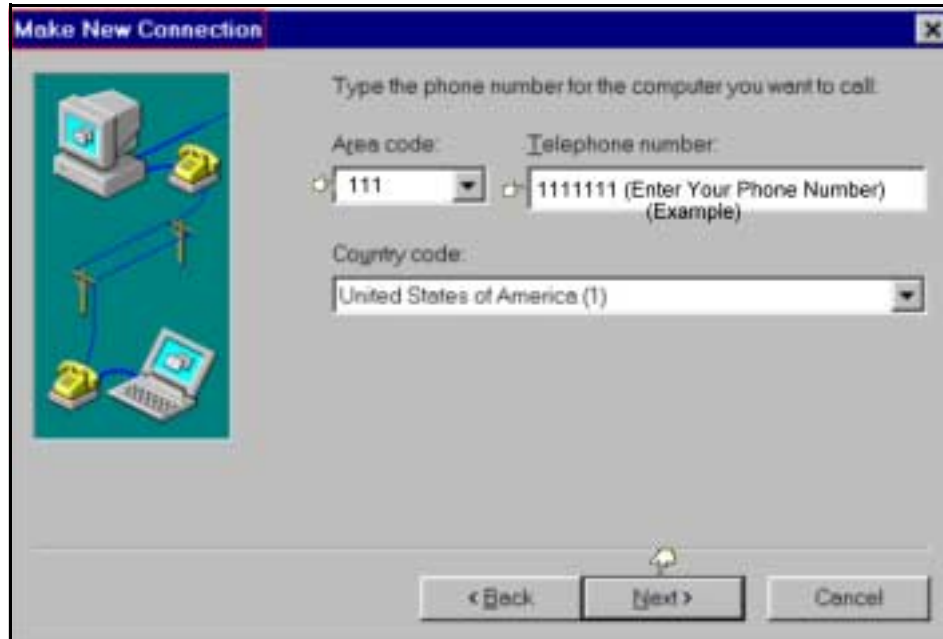
f. A third `Make New Connection` window will appear. Click on the **Finish** button.

g. Click once on the connection you just created to select it. Click on the **File** menu and the
    click on **P**r**operties**.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

h. In the `MSCF` window, click on the **Server Types** tab. Ensure `PPP, Windows 95,` `Windows NT 3.5, Internet` is selected as the type of Dial-Up Server.
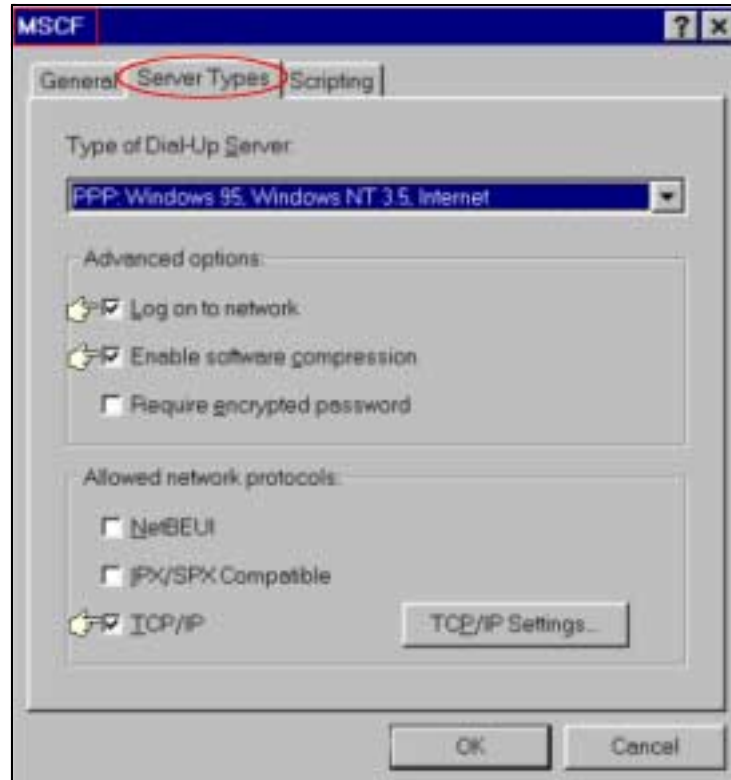
i. In the same `MSCF` window, under the `Server Types` tab `Advanced options`, ensure `Log on to network`, and `Enable software compression` is selected.

j. In the same `MSCF` window, under the `Server Types` tab `Allowed network protocols:`, deselect **<u>N</u>etBEUI** and **<u>I</u>PX/SPX Compatible** and ensure **<u>T</u>CP/IP** is selected.

5. Perform the following steps to add the Script file:

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

a. In the MSCF window, click on the **Scripting** tab. Click on the **Browse** button, and the choose the **mscf** file located on the CD-ROM titled RDA/RPG Remote Access Terminal Software Enhancement for Open RPG and then select **Open**.
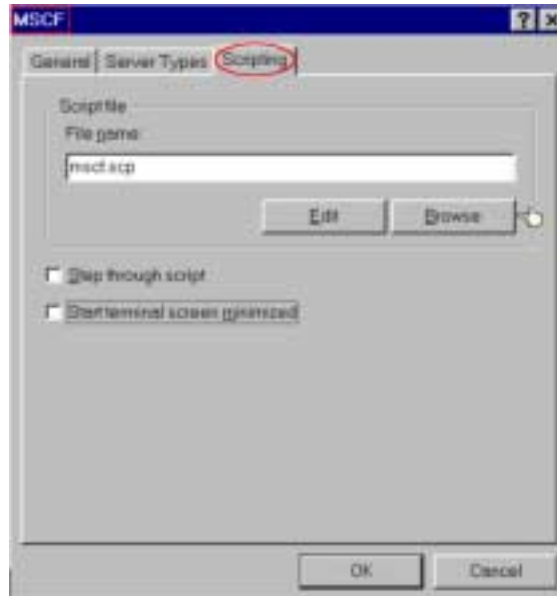
b. In the MSCF window, Scripting tab, click on the **Edit** button. A Notepad window will appear.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

c. In the Notepad window, select **File**, and then **Save As..**. Save the file to **c:\Program files\Accessories\mscf.scp** and then click on the **Save** button. Close the Notepad window.

d. In the MSCF window, Scripting tab, deselect the Start terminal screen minimized box, and then click on the **OK** button.
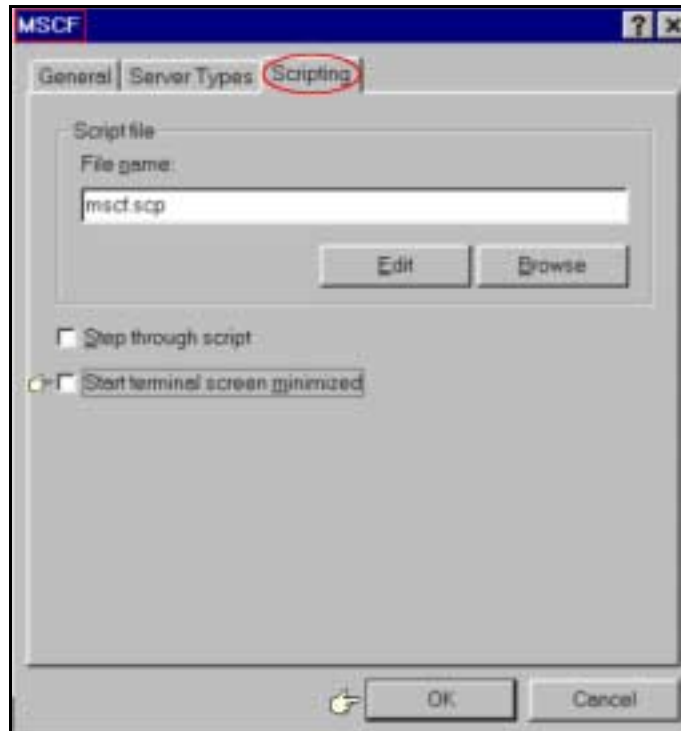
e. The Dial-Up Networking configuration for the MSCF is now completed.

6. Perform the following procedures to temporarily set up a dialup network connection to the MSCF located at ROC for testing:

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

a. In the `Dial-Up Networking` window, double click on the **Make New Connection** icon. The `Make New Connection Window` will appear.

b. At the `Make New Connection` window, in the `Type a name for the computer you are dialing` box, enter **TEST** and then click on the **Next>** key.
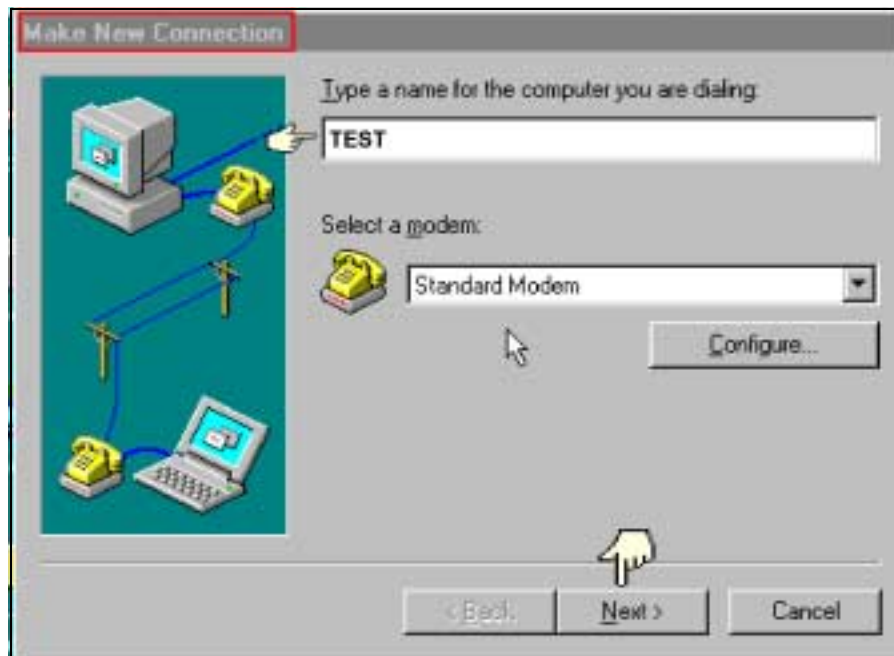
ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

c. At a second window titled `Make New Connection`, enter **405** in the `Area code:` text box, and **3662956** in the `Telephone number:` text box and then click on the **Next>** button.

d. A third `Make New Connection` window will appear. Click on the **Finish** button.

e. Click once on the connection you just created to select it. Click on the **File** menu and the click on **Properties**.

A15

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

f.   In the `MSCF` window, click on the **Server Types** tab. Ensure `PPP, Windows 95,`
`Windows NT 3.5, Internet` is selected as the type of Dial-Up Server.
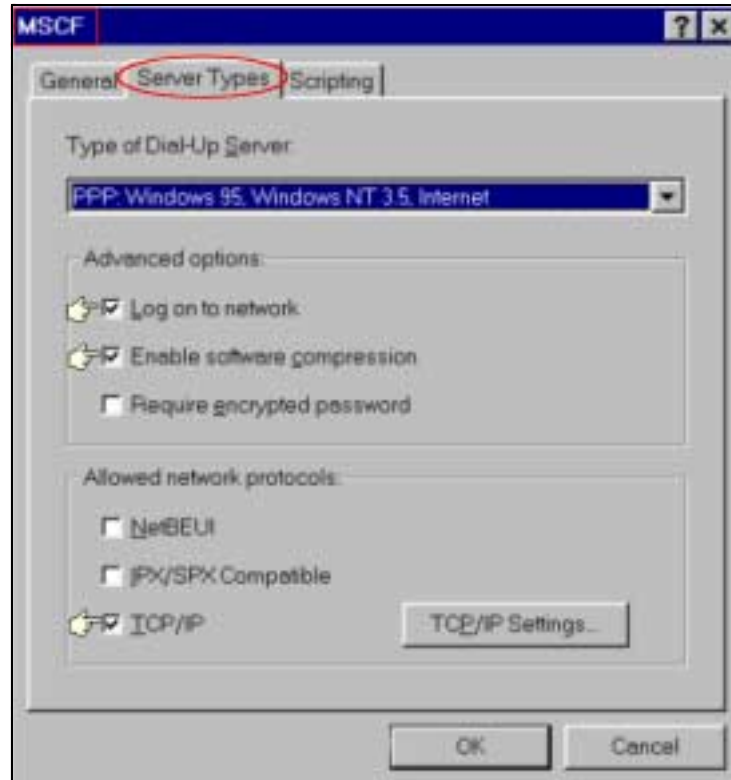
g.   In the same `MSCF` window, under the `Server Types` tab `Advanced options`, ensure
`Log on to network`, and `Enable software compression` is selected.

h.   In the same `MSCF` window, under the `Server Types` tab `Allowed network`
`protocols:`, deselect **NetBEUI** and **IPX/SPX Compatible** and ensure **TCP/IP** is
selected.

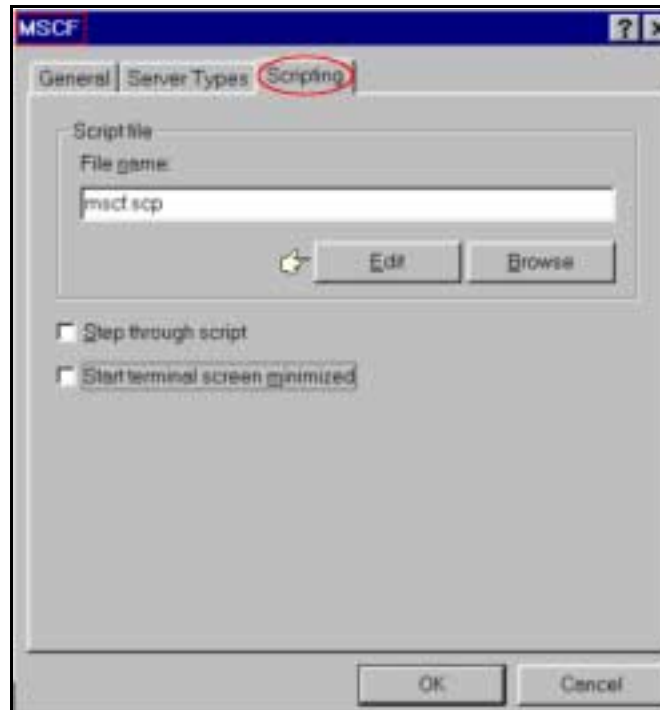7.   Perform the following steps to add the Script file:

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

a. In the `MSCF` window, click on the **Scripting** tab. Click on the **Browse** button, choose the mscf.scp file located in the C:\Program Files\Accessories directory and then click on the **Open** button to accept this file.

b. In the `MSCF` window, `Scripting` tab, deselect the `Start terminal screen` `minimized` box, and then click on the **OK** button.

c. The Dial-Up Networking configuration for the Test Connection is now completed.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

8. Perform the following steps to setup phone status:

a. In the `Dial-Up Networking` window, select the TEST configuration previously created and double click.

NOTE

> The password "dial" should be entered in lower case letters. The Users name and password are case sensitive.

b. In the `Connect To` window, in the `User name:` text box enter **dial**. In the `Password:` text window, enter **dial**.

c. Click on **Dial Properties**.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

d. In the `Dial Properties` window, enter the appropriate number to access an outside line and a long distance line, and then click on the **OK** button. For example 9 followed by 9, depending on your phone system.
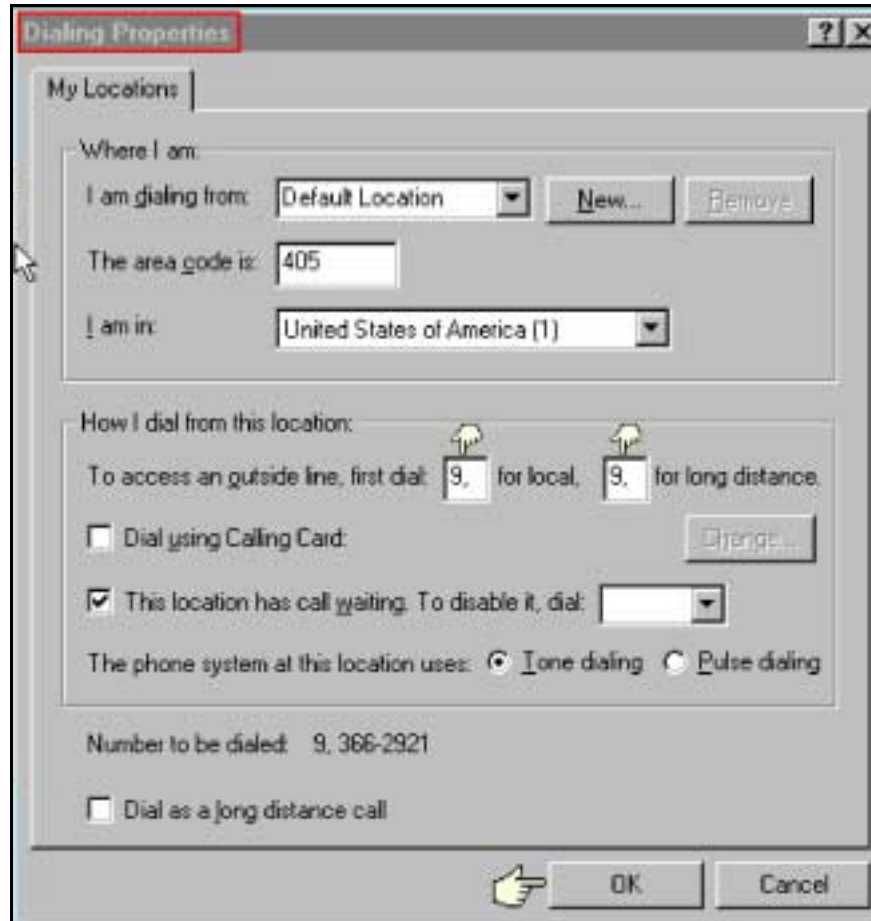
e. In the `Connect To` window, click **Connect** to make a connection. If you receive a busy signal, wait 1 to 2 minutes and try again. A busy signal may be caused by other sites testing these procedures.

9. Perform the following steps to test the dial-up networking capability to connect to the MSCF located at the ROC:

NOTE

If any additional login prompts appear through Microsoft Netmeeting or Microsoft Network, cancel them. These additional login requests will have no effect on remote MSCF connectivity.

a. Login screen appears. After the login and password are verified, click **Continue** and the login screen will minimize with the successful completion of the login. Close the test connection window by clicking on the **Close** button.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

b.   At the Windows 95 tool bar, click on the **Start** and then the **Run** button to establish a telnet session with the MSCF.   In the `Run` window, on the `Open:` text line, enter   **telnet 172.25.162.20** and then click on the **OK** button.   A government warning screen and a UNIX login prompt, as shown below will appear. At the `Telnet` window, login as **roger<Enter>**, with the password being **roger<Enter>** as well.
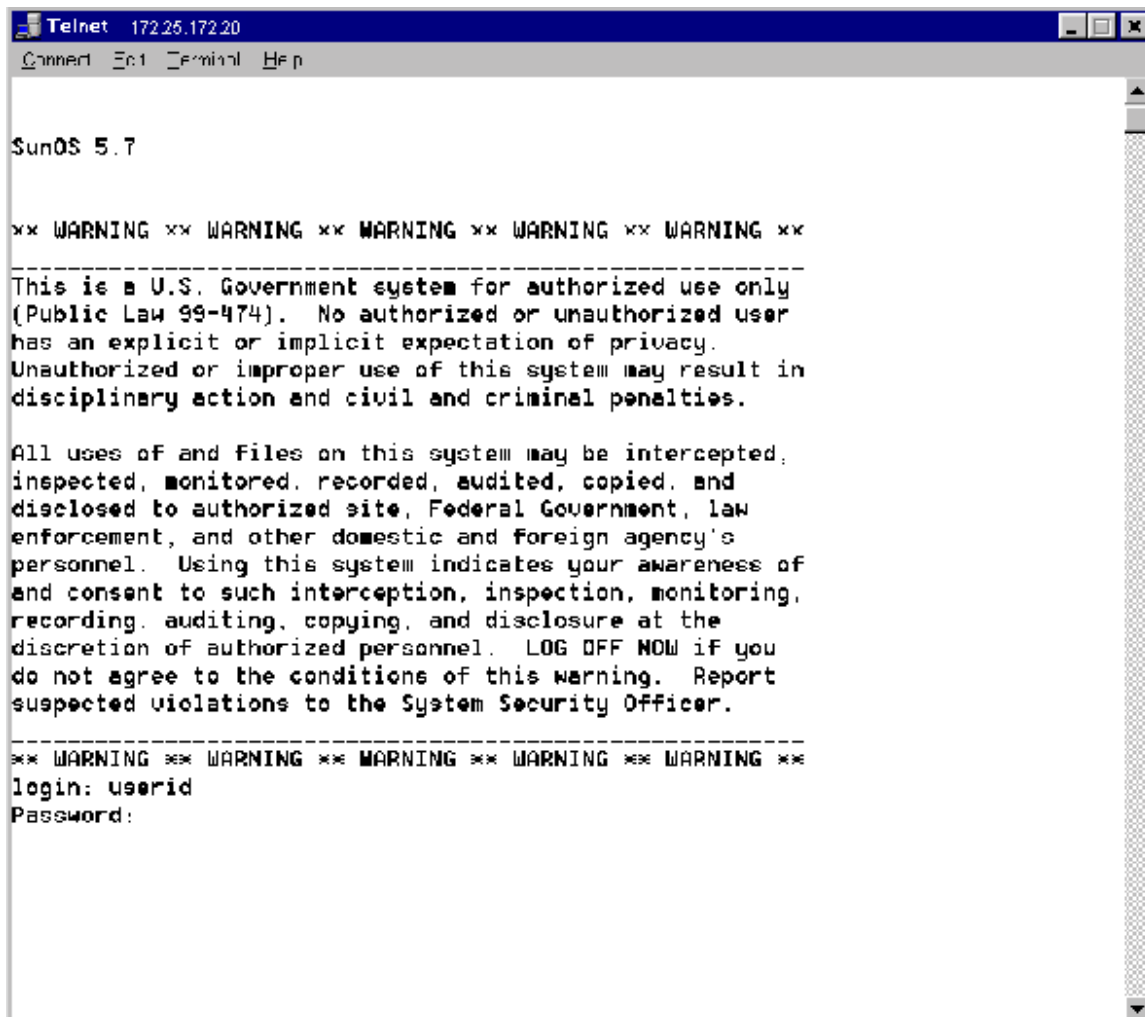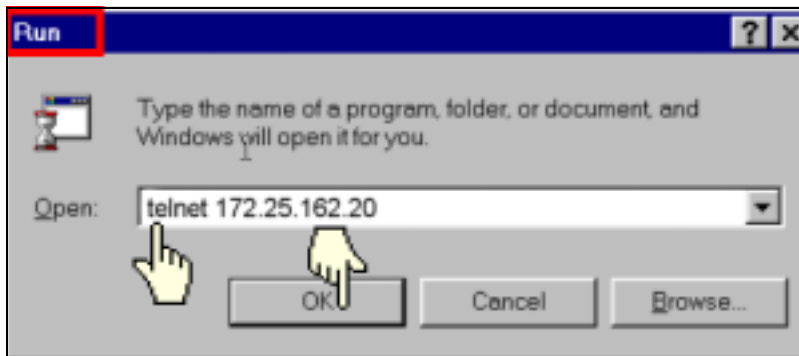
ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

c. After logging into the MSCF, at the prompt enter the command
remote_mscfserver<Enter>.

d. Double click on the Internet Explorer icon and then enter the URL of
http://172.25.162.20:5801/<Enter> for the location address.

NOTE

The following step requires CD-ROM RDA/RPG Remote Access
Terminal Software Enhancement for Open RPG to be in the CD
ROM drive.

e. Once Microsoft Internet Explorer tries to open the URL address, you'll be prompted to
install Microsoft Virtual Machine. Select **Download** to download the Microsoft Virtual
Machine. The program states that it will take approximately 42 minutes to install. The
program actually takes approximately 1 to 2 minutes.
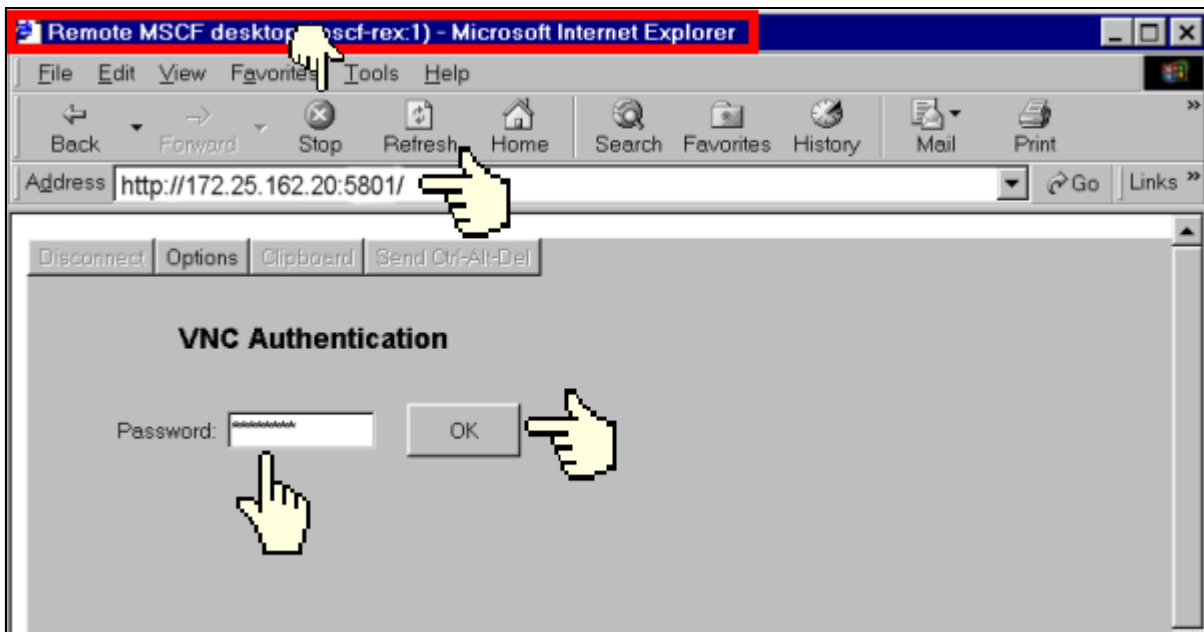
(1) Enter the VNC password as **password** and then click on **OK**.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

(2) Verify the RPG application screen opens in the browser, as shown below, then close Internet Explorer by clicking on the **x** in the upper right hand corner.
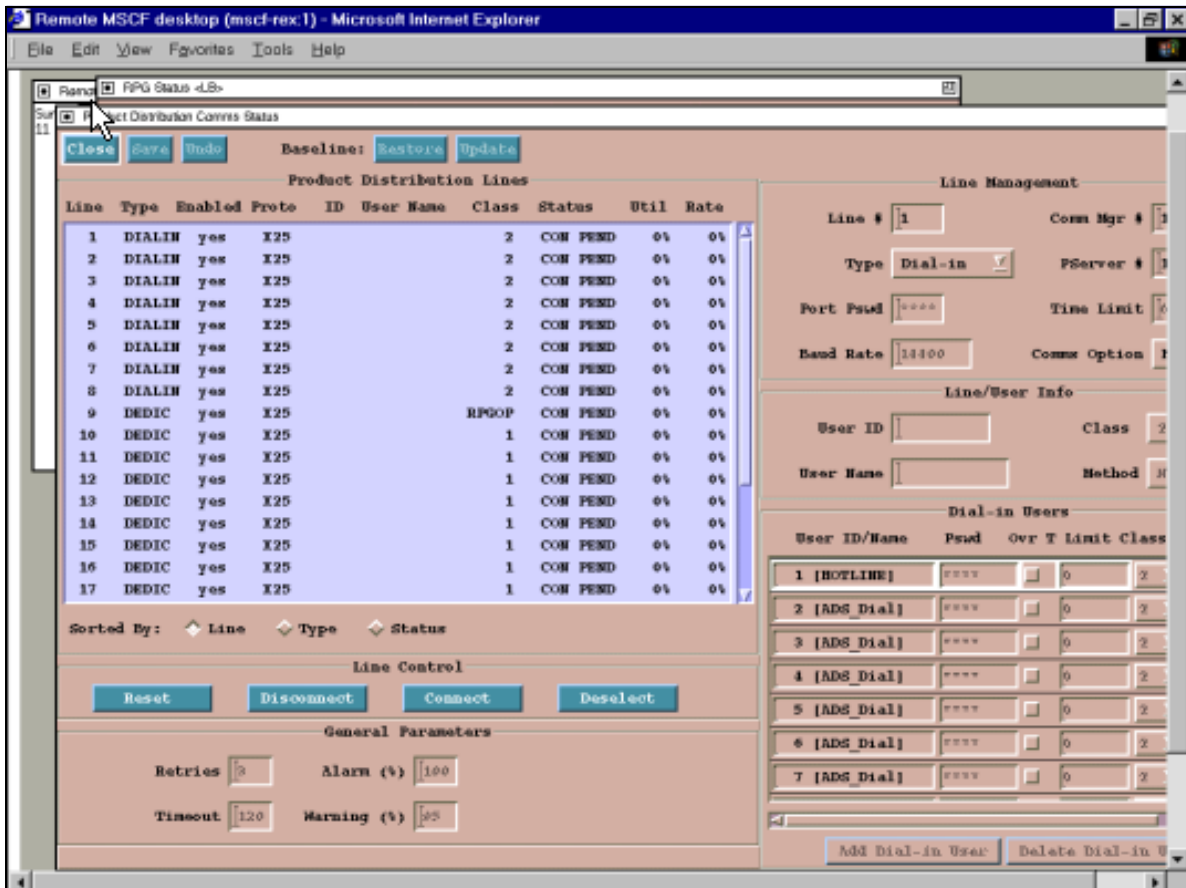
10. Exit the Remote MSCF Server by performing the following steps:

NOTE

If you disconnect from the MSCF without exiting the Remote MSCF Server, the server will continues to run under your user id. If someone else with dialup access to the MSCF dials into it while the Remote MSCF Server is still running, they can access the server through a web browser and any actions they carry out will appear to have been done by you. This is equivalent to logging into a system and then walking away without securing it. Therefore, follow these steps to exit the Remote MSCF Server:

a. Return to your telnet window and enter, **remote_mscfserver –kill :1<Enter>**.

b. In the telnet window enter **exit<Enter>**. This will release you from the ability to do RPG operations. Enter **exit<Enter>** again to disconnect the telnet session at the MSCF.

ATTACHMENT 1 (Continued)

RRRAT SOFTWARE ENHANCEMENT PROCEDURES

    c. Click **OK** to confirm the lost connection.

    d. Close the telnet windows by clicking on the **x** in the upper right and corner.

    e. At the `Dial-Up Networking` window, double click on the **Dial-Up Networking** icon for your TEST connection, select **Disconnect**.

    f. At the **Dial-up Networking** window, right click on the **TEST** icon and then select **<u>D</u>elete** to delete the TEST icon. When asked if you want to delete the TEST icon, click on the **Yes** button and then close the Dial-Up Networking window.

    g. Restore system to normal operations and remove the CD-ROM titled <u>RDA/RPG Remote Access Terminal Software Enhancement for Open RPG</u> from the CD-ROM drive.

11. Repeat the entire procedures on each UCP and RDA RRRAT terminal.

ATTACHMENT 2

EFFECTIVITY

NOTE

The NWS sites which currently possess a DoD UCP are required to perform and report this modification to that UCP.

NWS

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
	Eastern Region			
ALBANY	EAST BERNE, NY	RDA	ENX	WN9518
ALBANY	ALBANY, NY	RPG	ALY	WN9518
BINGHAMTON	BINGHAMPTON, NY	RDA	BGM	WN9515
BINGHAMTON	JOHNSON CITY, NY	RPG	BGM	WN9515
BOSTON	TAUNTON, MA	RDA	BOX	WN9509
BOSTON	TAUNTON, MA	RPG	BOX	WN9509
BROOKHAVEN	UPTON, NY	RPG	OKX	WN9912
BROOKHAVEN	UPTON, NY	RDA	OKX	WN9912
BUFFALO	BUFFALO, NY	RPG	BUF	WN9528
BUFFALO	BUFFALO, NY	RDA	BUF	WN9528
BURLINGTON	SOUTH BURLINGTON, VT	RPG	BTV	WN9617
BURLINGTON	COLCHESTER, VT	RDA	CXX	WN9617
BURLINGTON/FT DRUM	SOUTH BURLINGTON, VT	RPG/UCP	BTV	WN9617
CARIBOU	CARIBOU, ME	RPG	CAR	WN9712
CARIBOU	HOULTON, ME	RDA	CBW	WN9712

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
CHARLESTON, SC	CHARLESTON, SC	RPG	CHS	WN9208
CHARLESTON, SC	GRAYS, SC	RDA	CLX	WN9208
CHARLESTON, WV	CHARLESTON, WV	RPG	RLX	WN9414
CHARLESTON, WV	CHARLESTON, WV	RDA	RLX	WN9414
CINCINNATI	WILMINGTON, OH	RPG	ILN	WN9710
CINCINNATI	WILMINGTON, OH	RDA	ILN	WN9710
CLEVELAND	CLEVELAND, OH	RPG	CLE	WN9524
CLEVELAND	CLEVELAND, OH	RDA	CLE	WN9524
COLUMBIA	WEST COLUMBIA, SC	RPG	CAE	WN9310
COLUMBIA	WEST COLUMBIA, SC	RDA	CAE	WN9310
GREER	GREER, SC	RDA	GSP	WN9312
GREER	GREER, SC	RPG	GSP	WN9312
MOREHEAD CITY	NEWPORT, NC	RDA	MHX	WN9307
MOREHEAD CITY	NEWPORT, NC	RPG	MHX	WN9307
NORFOLK	WAKEFIELD, VA	RPG	AKQ	WN9952
NORFOLK	WAKEFIELD, VA	RDA	AKQ	WN9952
NORFOLK/DOVER AFB	WAKEFIELD, VA	RPG/UCP	AKQ	WN9952
PHILADELPHIA	MOUNT HOLLY, NJ	RPG	PHI	WN9950
PHILADELPHIA	FORT DIX, NJ	RDA	DIX	WN9950
PITTSBURGH	CORAOPOLIS, PA	RPG	PBZ	WN9917
PITTSBURGH	CORAOPOLIS, PA	RDA	PBZ	WN9917
PORTLAND, ME	GRAY, ME	RPG	GYX	WN9938
PORTLAND, ME	GRAY, ME	RDA	GYX	WN9938

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
RALEIGH/DURHAM	RALEIGH, NC	RPG	RAH	WN9306
RALEIGH/DURHAM	CLAYTON, NC	RDA	RAX	WN9306
ROANOKE	BLACKSBURG, VA	RPG	RNK	WN9954
ROANOKE	ROANOKE, VA	RDA	FCX	WN9954
STATE COLLEGE	STATE COLLEGE, PA	RDA	CCX	WN9925
STATE COLLEGE	STATE COLLEGE, PA	RPG	CTP	WN9925
STERLING	STERLING, VA	RPG	LWX	WN9931
STERLING	STERLING, VA	RDA	LWX	WN9931
WILMINGTON	SHALLOTTE, NC	RDA	LTX	WN9301
WILMINGTON	WILMINGTON, NC	RPG	ILM	WN9301

Southern Region

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
ALBUQUERQUE	ALBUQUERQUE, NM	RDA	ABX	WP9365
ALBUQUERQUE	ALBUQUERQUE, NM	RPG	ABQ	WP9365
ALBQUQERQUE/CANNON AFB	ALBUQUERQUE, NM	RPG/UCP	ABQ	WP9365
AMARILLO	AMARILLO, TX	RDA	AMA	WP9363
AMARILLO	AMARILLO, TX	RPG	AMA	WP9363
ATLANTA	PEACHTREE CITY, GA	RDA	FFC	WP9219
ATLANTA	PEACHTREE CITY, GA	RPG	FFC	WP9219
ATLANTA/ROBINS AFB	PEACHTREE CITY, GA	RPG/UCP	FFC	WP9219
AUSTIN/SAN ANTONIO	NEW BRAUNFELS, TX	RDA	EWX	WP9253
AUSTIN/SAN ANTONIO	NEW BRAUNFELS, TX	RPG	EWX	WP9253
AUSTIN/SAN ANTONIO/LAUGHLIN AFB	NEW BRAUNFELS, TX	RPG/UCP	EWX	WP9253

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
BIRMINGHAM	ALABASTER, AL	RDA	BMX	WP9957
BIRMINGHAM	ALABASTER, AL	RPG	BMX	WP9957
BIRMINGHAM/MAXWELL AFB	ALABASTER, AL	RPG/UCP	BMX	WP9957
BROWNSVILLE	BROWNSVILLE, TX	RPG	BRO	WP9250
BROWNSVILLE	BROWNSVILLE, TX	RDA	BRO	WP9250
CORPUS CHRISTI	CORPUS CHRISTI, TX	RPG	CRP	WP9251
CORPUS CHRISTI	CORPUS CHRISTI, TX	RDA	CRP	WP9251
DALLAS/FT WORTH	FORT WORTH, TX	RDA	FWS	WP9259
DALLAS/FT WORTH	FORT WORTH, TX	RPG	FWD	WP9259
DALLAS/FT WORTH/FT HOOD	FORT WORTH, TX	RPG/UCP	FWD	WP9259
EL PASO	SANTA TERESA, NM	RDA	EPZ	WP9270
EL PASO	SANTA TERESA, NM	RPG	EPZ	WP9270
EL PASO/HOLLOMAN AFB	SANTA TERESA, NM	RPG/UCP	EPZ	WP9270
HOUSTON	DICKINSON, TX	RPG	HGX	WP9935
HOUSTON	DICKINSON, TX	RDA	HGX	WP9935
JACKSON, MS	JACKSON, MS	RDA	JAN	WP9235
JACKSON, MS	JACKSON, MS	RPG	JAN	WP9235
JACKSON/COLUMBUS AFB	JACKSON, MS	RPG/UCP	JAN	WP9235
JACKSONVILLE	JACKSONVILLE, FL	RDA	JAX	WP9206
JACKSONVILLE	JACKSONVILLE, FL	RPG	JAX	WP9206
JACKSONVILLE/MOODY AFB	JACKSONVILLE, FL	RPG/UCP	JAX	WP9206
KEY WEST	BOCA CHICA KEY, FL	RDA	BYX	WP9201
KEY WEST	BOCA CHICA KEY, FL	RPG	BYX	WP9201

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
KNOXVILLE	MORRISTOWN, TN	RDA	MRX	WP9325
KNOXVILLE	MORRISTOWN, TN	RPG	MRX	WP9325
LAKE CHARLES	LAKE CHARLES, LA	RDA	LCH	WP9240
LAKE CHARLES	LAKE CHARLES, LA	RPG	LCH	WP9240
LAKE CHARLES/FT POLK	LAKE CHARLES, LA	RPG/UCP	LCH	WP9240
LITTLE ROCK	NORTH LITTLE ROCK, AR	RDA	LZK	WP9340
LITTLE ROCK	NORTH LITTLE ROCK, AR	RPG	LZK	WP9340
LUBBOCK	LUBBOCK, TX	RDA	LBB	WP9933
LUBBOCK	LUBBOCK, TX	RPG	LUB	WP9933
MELBOURNE	MELBOURNE, FL	RPG	MLB	WP9204
MELBOURNE	MELBOURNE, FL	RDA	MLB	WP9204
MEMPHIS	MEMPHIS, TN	RPG	MEG	WP9334
MEMPHIS	MILLINGTON, TN	RDA	NQA	WP9334
MIAMI	MIAMI , FL	RPG	MFL	WP9918
MIAMI	MIAMI, FL	RDA	AMX	WP9918
MIDLAND/ODESSA	MIDLAND, TX	RDA	MAF	WP9265
MIDLAND/ODESSA	MIDLAND, TX	RPG	MAF	WP9265
MOBILE	MOBILE, AL	RDA	MOB	WP9223
MOBILE	MOBILE, AL	RPG	MOB	WP9223
MOBILE/EGLIN AFB	MOBILE, AL	RPG/UCP	MOB	WP9223
NASHVILLE	OLD HICKORY, TN	RPG	OHX	WP9327
NASHVILLE	OLD HICKORY, TN	RDA	OHX	WP9327

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
NORMAN	MIDWEST CITY, OK	RDA	TLX	WP9921
NORMAN	NORMAN, OK	RPG	OUN	WP9921
NORMAN/ALTUS AFB	NORMAN, OK	RPG/UCP	OUN	WP9921
NORMAN/VANCE AFB	NORMAN, OK	RPG/UCP	OUN	WP9921
NORTHEAST ALABAMA	ALABASTER, AL	RPG	BMX	WP9957
NORTHEAST ALABAMA	HYTOP, AL	RDA	HTX	WP9913
SAN ANGELO	SAN ANGELO, TX	RDA	SJT	WP9263
SAN ANGELO	SAN ANGELO, TX	RPG	SJT	WP9263
SAN ANGELO/DYESS AFB	SAN ANGELO, TX	RPG/UCP	SJT	WP9263
SHREVEPORT	SHREVEPORT, LA	RPG	SHV	WP9248
SHREVEPORT	SHREVEPORT, LA	RDA	SHV	WP9248
SLIDELL	SLIDELL, LA	RPG	LIX	WP9919
SLIDELL	SLIDELL, LA	RDA	LIX	WP9919
TALLAHASSEE	TALLAHASSEE, FL	RDA	TLH	WP9214
TALLAHASSEE	TALLAHASSEE, FL	RPG	TLH	WP9214
TALLAHASSEE/FT RUCKER	TALLAHASSEE, FL	RPG/UCP	TLH	WP9214
TAMPA	RUSKIN, FL	RDA	TBW	WP9961
TAMPA	RUSKIN, FL	RPG	TBW	WP9961
TULSA	TULSA, OK	RPG	TSA	WP9356
TULSA	INOLA, OK	RDA	INX	WP9356
WESTERN ARKANSAS	CHAFFEE RIDGE, AR	RDA	SRX	WP9356
WESTERN ARKANSAS	TULSA, OK	RPG	TSA	WP9356

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
Central Region				
ABERDEEN	ABERDEEN, SD	RPG	ABR	WR9659
ABERDEEN	ABERDEEN, SD	RDA	ABR	WR9659
BISMARCK	BISMARCK, ND	RPG	BIS	WR9764
BISMARCK	BISMARCK, ND	RDA	BIS	WR9764
BISMARCK/MINOT AFB	BISMARCK, ND	RPG/UCP	BIS	WR9764
CHEYENNE	CHEYENNE, WY	RDA	CYS	WR9564
CHEYENNE	CHEYENNE, WY	RPG	CYS	WR9564
CHICAGO	ROMEOVILLE, IL	RPG	LOT	WR9969
CHICAGO	ROMEOVILLE, IL	RDA	LOT	WR9969
DENVER	BOULDER, CO	RPG	BOU	WR9469
DENVER	DENVER, CO	RDA	FTG	WR9469
DES MOINES	JOHNSTON, IA	RPG	DMX	WR9546
DES MOINES	JOHNSTON, IA	RDA	DMX	WR9546
DETROIT	WHITE LAKE, MI	RPG	DTX	WR9954
DETROIT	WHITE LAKE, MI	RDA	DTX	WR9954
DODGE CITY	DODGE CITY, KS	RPG	DDC	WR9451
DODGE CITY	DODGE CITY, KS	RDA	DDC	WR9451
DULUTH	DULUTH, MN	RPG	DLH	WR9745
DULUTH	DULUTH, MN	RDA	DLH	WR9745

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
FARGO/GRAND FORKS	GRAND FORKS, ND	RPG	FGF	WR9750
FARGO/GRAND FORKS	GRAND FORKS, ND	RDA	MVX	WR9750
GOODLAND	GOODLAND, KS	RPG	GLD	WR9465
GOODLAND	GOODLAND, KS	RDA	GLD	WR9465
GRAND ISLAND	BLUE HILL, NE	RDA	UEX	WR9552
GRAND ISLAND	HASTINGS, NE	RPG	GID	WR9552
GRAND RAPIDS	GRAND RAPIDS, MI	RDA	GRR	WR9635
GRAND RAPIDS	GRAND RAPIDS, MI	RPG	GRR	WR9635
GREEN BAY	GREEN BAY, WI	RDA	GRB	WR9645
GREEN BAY	GREEN BAY, WI	RPG	GRB	WR9645
INDIANAPOLIS	INDIANAPOLIS, IN	RPG	IND	WR9438
INDIANAPOLIS	INDIANAPOLIS, IN	RDA	IND	WR9438
JACKSON, KY	JACKSON, KY	RPG	JKL	WR9956
JACKSON, KY	JACKSON, KY	RDA	JKL	WR9956
LA CROSSE	LA CROSSE, WI	RPG	ARX	WR9643
LA CROSSE	LA CROSSE, WI	RDA	ARX	WR9643
LINCOLN	LINCOLN, IL	RPG	ILX	WR9436
LINCOLN	LINCOLN, IL	RDA	ILX	WR9436
LOUISVILLE	LOUISVILLE, KY	RPG	LMK	WR9423
LOUISVILLE	FORT KNOX, KY	RDA	LVX	WR9423
MARQUETTE	NEGAUNEE, MI	RPG	MQT	WR9743
MARQUETTE	NEGAUNEE, MI	RDA	MQT	WR9743

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
MILWAUKEE	DOUSMAN, WI	RPG	MKX	WR9965
MILWAUKEE	DOUSMAN, WI	RDA	MKX	WR9965
MINNEAPOLIS	CHANHASSEN, MN	RDA	MPX	WR9658
MINNEAPOLIS	CHANHASSEN, MN	RPG	MPX	WR9658
NCL MICHIGAN	GAYLORD, MI	RPG	APX	WR9610
NCL MICHIGAN	GAYLORD, MI	RDA	APX	WR9610
NORTH PLATTE	NORTH PLATTE, NE	RPG	LBF	WR9562
NORTH PLATTE	NORTH PLATTE, NE	RDA	LNX	WR9562
NORTHERN INDIANA	NORTH WEBSTER, IN	RPG	IWX	WR9534
NORTHERN INDIANA	NORTH WEBSTER, IN	RDA	IWX	WR9534
OMAHA	VALLEY, NE	RPG	OAX	WR9553
OMAHA	VALLEY, NE	RDA	OAX	WR9553
PADUCAH	PADUCAH, KY	RPG	PAH	WR9957
PADUCAH	PADUCAH, KY	RDA	PAH	WR9957
PADUCAH/FT CAMPBELL	PADUCAH, KY	RPG/UCP	PAH	WR9957
PLEASANT HILL	PLEASANT HILL, MO	RPG	EAX	WR9446
PLEASANT HILL	PLEASANT HILL, MO	RDA	EAX	WR9446
PUEBLO	PUEBLO, CO	RPG	PUB	WR9464
PUEBLO	PUEBLO, CO	RDA	PUX	WR9464
QUAD CITIES	DAVENPORT, IA	RPG	DVN	WR9544
QUAD CITIES	DAVENPORT, IA	RDA	DVN	WR9544
RAPID CITY	RAPID CITY, SD	RPG	UNR	WR9662
RAPID CITY	NEW UNDERWOOD, SD	RDA	UDX	WR9662

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
RIVERTON/LANDER	RIVERTON, WY	RPG	RIW	WR9576
RIVERTON/LANDER	RIVERTON, WY	RDA	RIW	WR9576
SIOUX FALLS	SIOUX FALLS, SD	RPG	FSD	WR9651
SIOUX FALLS	SIOUX FALLS, SD	RDA	FSD	WR9651
SPRINGFIELD	SPRINGFIELD, MO	RPG	SGF	WR9440
SPRINGFIELD	SPRINGFIELD, MO	RDA	SGF	WR9440
ST LOUIS	WELDON SPRING, MO	RPG	LSX	WR9971
ST LOUIS	WELDON STRING, MO	RDA	LSX	WR9971
TOPEKA	TOPEKA, KS	RPG	TOP	WR9456
TOPEKA	TOPEKA, KS	RDA	TWX	WR9456
WICHITA	WICHITA, KS	RDA	ICT	WR9450
WICHITA	WICHITA, KS	RPG	ICT	WR9450

Western Region

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
BILLINGS	BILLINGS, MT	RPG	BYZ	WT9677
BILLINGS	BILLINGS, MT	RDA	BLX	WT9677
BOISE	BOISE, ID	RDA	CBX	WT9681
BOISE	BOISE, ID	RPG	BOI	WT9681
EUREKA (BUNKER HILL)	EUREKA, CA	RDA	BHX	WT9594
EUREKA (BUNKER HILL)	EUREKA, CA	RPG	EKA	WT9594
GLASGOW	GLASGOW, MT	RPG	GGW	WT9768
GLASGOW	GLASGOW, MT	RDA	GGW	WT9768

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
GREAT FALLS	GREAT FALLS, MT	RPG	TFX	WT9950
GREAT FALLS	GREAT FALLS, MT	RDA	TFX	WT9950
LAS VEGAS	LAS VEGAS, NV	RDA	ESX	WT9386
LAS VEGAS	LAS VEGAS, NV	RPG	VEF	WT9386
LAS VEGAS/EDWARDS AFB	LAS VEGAS, NV	RPG/UCP	VEF	WT9386
LOS ANGELES	LOS ANGELES, CA	RDA	VTX	WT9295
LOS ANGELES	OXNARD, CA	RPG	LOX	WT9295
PENDLETON	PENDLETON, OR	RDA	PDT	WT9688
PENDLETON	PENDLETON, OR	RPG	PDT	WT9688
PHOENIX	PHOENIX, AZ	RDA	IWA	WT9278
PHOENIX	PHOENIX, AZ	RPG	PSR	WT9278
POCATELLO	SPRINGFIELD, ID	RDA	SFX	WT9578
POCATELLO	POCATELLO, ID	RPG	PIH	WT9578
PORTLAND, OR	PORTLAND, OR	RDA	RTX	WT9698
PORTLAND, OR	PORTLAND, OR	RPG	PQR	WT9698
SACRAMENTO	SACRAMENTO, CA	RPG	STO	WT9914
SACRAMENTO	DAVIS, CA	RDA	DAX	WT9914
SACRAMENTO/BEALE AFB	SACRAMENTO, CA	RPG/UCP	STO	WT9914
SAN DIEGO	SAN DIEGO, CA	RPG	SGX	WT9918
SAN DIEGO	SAN DIEGO, CA	RDA	NKX	WT9918
SAN FRANCISCO	MONTEREY, CA	RPG	MTR	WT9933
SAN FRANCISCO	LOS GATOS, CA	RDA	MUX	WT9933

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
SAN JOAQUIN VALY	HANFORD, CA	RPG	HNX	WT9389
SAN JOAQUIN VALY	HANFORD, CA	RDA	HNX	WT9389
SANTA ANA MTS	SAN DIEGO, CA	RPG	SGX	WT9918
SANTA ANA MTS	SANTA ANA MOUNTAINS, CA	RDA	SOX	WT9918
SEATTLE	EVERETT, WA	RDA	ATX	WT9922
SEATTLE	SEATTLE, WA	RPG	SEW	WT9922
SPOKANE	SPOKANE, WA	RPG	OTX	WT9785
SPOKANE	SPOKANE, WA	RDA	OTX	WT9785
TUCSON	TUCSON, AZ	RDA	EMX	WT9274
TUCSON	TUCSON, AZ	RPG	TWC	WT9274

Pacific Region

AGANA/ANDERSEN AFB	AGANA, GU	RPG/UCP	GUM	WW9902

Miscellaneous

NRC #1	KANSAS CITY, MO	RDA	NRCM7	WG9163
NRC #1	KANSAS CITY, MO	RPG	NRCM7	WG9163
NRC #2	KANSAS CITY, MO	RPG	NRCM7	WG9163
NRC #2	KANSAS CITY, MO	RDA	NRCM7	WG9163
NSSL (RDA/ONAN GEN/PDST)	NORMAN, OK	RDA	NORO2	MAG000

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
ROC REDUNDANT	NORMAN, OK	RDA	CRI02	WG9410
ROC REDUNDANT	NORMAN, OK	RPG	CRI02	WG9410
TRAINING CENTER #1 NWSTC	KANSAS CITY, MO	RPG	TTCM7	WB9612
TRAINING CENTER #1 NWSTC	KANSAS CITY, MO	RDA	TTCM7	WB9612
TRAINING CENTER #2 NWSTC	KANSAS CITY, MO	RDA	TTCM7	WB9612
TRAINING CENTER #2 NWSTC	KANSAS CITY, MO	RPG	TTCM7	WB9612

DoD

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
ALTUS AFB	FREDERICK, OK	RDA	FDR	FE4419
ANDERSEN AFB	ANDERSEN AFB, GU	RDA	UAM	FE5240
BEALE AFB	OROVILLE, CA	RDA	BBX	FE4686
CAMP HUMPHREYS	CAMP HUMPHREYS, KO	RPG	PTK	FI5294
CAMP HUMPHREYS	CAMP HUMPHREYS, KO	RDA	PTK	FI5294
CANNON AFB	FIELD, NM	RDA	FDX	FE4855
COLUMBUS AFB	GREENWOOD SPRINGS, MS	RDA	GWX	FE3022
CP TANGO/CAMP HUMPHREYS	CP TANGO, KO	RPG/UCP	59P	FH5294
CP TANGO/KUNSAN AB	CP TANGO, KO	RPG/UCP	59P	FH5294
DOVER AFB	ELLENDALE STATE FOREST, DE	RDA	DOX	FE4497
DYESS AFB	MORAN, TX	RDA	DYX	FE4661
EDWARDS AFB	BORON, CA	RDA	EYX	FE2805

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
EGLIN AFB	RED BAY, FL	RDA	EVX	FE2823
FT CAMPBELL	TRENTON, KY	RDA	HPX	FY4812
FT DRUM	MONTAGUE, NY	RDA	TYX	FY4846
FT HOOD	GRANGER, TX	RDA	GRK	FY4824
FT POLK	FT POLK, LA	RDA	POE	FY4825
FT RUCKER	ECHO, AL	RDA	EOX	FY4805
HOLLOMAN AFB	RUIDOSO, NM	RDA	HDX	FE4801
KADENA AB	KADENA AB, JA	RDA	KAD	FH5270
KADENA AB	KADENA AB, JA	RPG	KAD	FH5270
KEESLER AFB MNTC TRNG A	KEESLER AFB, MS	RPG	BIX	FE3010
KEESLER AFB MNTC TRNG A	KEESLER AFB, MS	RDA	BIX	FE3010
KEESLER AFB MNTC TRNG B	KEESLER AFB, MS	RDA	BIX	FE3010
KEESLER AFB MNTC TRNG B	KEESLER AFB, MS	RPG	BIX	FE3010
KEESLER AFB OPS TRNG	D'IBERVILLE, MS	RDA	BIX	FE3010
KEESLER AFB OPS TRNG	D'IBERVILLE, MS	RPG	BIX	FE3010
KUNSAN AB	KUNSAN AB, KO	RDA	KUZ	FH5284
LAJES AB	SANTA BARBARA, AZR	RPG	PLA	FE4486
LAJES AB	SANTA BARBARA, AZR	RDA	PLA	FE4486
LAUGHLIN AFB	BRACKETVILLE, TX	RDA	DFX	FE3099
MAXWELL AFB	CARRVILLE, AL	RDA	MXX	FE3300
MINOT AFB	DEERING, ND	RDA	MBX	FE4528

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
MOODY AFB	SOUTH STOCKTON, GA	RDA	VAX	FE4830
ROBINS AFB	JEFFERSONVILLE, GA	RDA	JGX	FE2067
VANCE AFB	CHEROKEE, OK	RDA	VNX	FE3029
VANDENBERG AFB	ORCUTT, CA	RDA	VBX	FE4610
VANDENBERG AFB	ORCUTT, CA	RPG	VBX	FE4610

ATTACHMENT 3

RRRAT SOFTWARE UPGRADE FOR ORPG DEPLOYMENT

Site Name: _____

Site Identifier: _____

Total Time to Complete this Modification Document: _____

Technician's Name(s): _____

Technician's Phone Number: _____

Date Completed: _____

Equipment Modified (SID)   RDA _____   RPG _____   RPG/UCP_____

Problem(s) Encountered:
_____

_____

_____

_____

Upon completion of this form, return the information to the ROC using one of the four methods below:

      1. Mailing Address: Program Branch, Retrofit Management Team
                               WSR-88D Radar Operation Center
                               3200 Marshall Ave., Suite 101
                               Norman, OK 73072-8028

      2. FAX Number: (405) 366-6553
                               ATTN: Retrofit Management Team

      3. E-mail Address: NEXRAD.Logistics@noaa.gov

      4. Web Version: http://www.roc.noaa.gov/ssb/logistics/completion.asp

ENGINEERING MANAGEMENT REPORTING SYSTEM
MAINTENANCE RECORD

Document Number G 51301

General Information			
1. Open Date 08 / 06 / 01	**Time** 0900	**2. Initials** DKR	**3. Response Priority (check one)** ○ Immediate ○ Low ○ Routine ☒ Not Applicable
4. Close Date 08 / 06 / 01	**Time** 1000		

5. Description
UPGRADE RRRAT SOFTWARE IAW SOFT NOTE 17

Equipment Information			
6. Station ID BUF	**7. Equipment Code** UCP	**8. Serial Number** AA30798701	**9. TM** M
			10. AT M
			11. How Mal. 999

12. EQUIPMENT OPERATIONAL STATUS TIMES

a. Fully Operational	b. Logistics Delay	Partly Operational	c. All Other	Not Operational	d. Logistics Delay	e. All Other
			1:00			

13. Parts Failure Information

Block #	a. ASN	b.	NSN	c. TM	d. AT	e. How Mal.	f. Qty.	g. Maint. Hrs.
1								
2								
3								
4								
5								

14. Work Load Information

Type	Staff Hrs.
a. Routine	
b. Non-routine	
c. Travel	
d. Misc.	1:00
e. Overtime	

16. Initials DKR

Miscellaneous Information	
15. Maintenance Comments SOFTWARE UPGRADE COMPLETE	

17. SPECIAL PURPOSE REPORTING	a. Mod. No. S17	b. Mod./Act./Deact.Date 08/06/01	c.	d.	e.
18. CONFIGURATION MGMT. REPORTING (use as directed)	ASN	Vendor Part Number (New Part)	Serial Number (Old Part)	Vendor Part Number (New Part)	Serial Number (New Part)